

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “receiver” in claims 5, 8 is used by the claim to mean “transmitting”, while the accepted meaning is “receiving.” The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atarius USPN 6,526,035 in view of Fukawa USPN 5,568,654.
7. As per claim 1, Atarius teaches generating a common code associated with a base station group including more than one base station as said second spreading code (Atarius paragraph 16: “~~the base stations use the same long code~~”), wherein said second spreading code functions as an identifier of said base station group (Atarius paragraph 17: “~~The second group of base stations can use a second long code~~”; fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell; paragraph 17: “~~the mobile station can identify the source (that is, the cell number) of signals from base stations in the second group by calculating how much the second long code has been shifted~~”); and storing said common code in base stations (not in Atarius but would be obvious as explained below) of said base station group and a mobile station belonging to said base station group (Atarius paragraph 17: “~~The mobile station can store or obtain a list of long codes~~”) to permit communication between the mobile station and the base station group (Atarius abstract: “~~A group of base stations or directional antennas use the same long code and synchronization codes. However, each source shifts the long code by a different amount so that for any two sources there is a unique difference. When the receiver receives the two signals~~”).

8. Atarius does not teach storing said common code in base stations. Fukawa 5568654 teaches storing said common code in base stations (Fukawa col. 15 lines 31-39; col. 10 line 59 to col. 11 line 18). Thus, it would have been obvious to one of ordinary skill in the art at the time

of the invention was made to implement the teachings of Fukawa into Atarius since Atarius suggests base station common code (something broad) in general and Fukawa suggests the beneficial use of storing common code in base stations such as compare previous location to current location to detect a location change which would initiate a sending of a registration signal (col. 10 line 59 to col. 11 line 18) in the analogous art of telecommunications.

9. As per claim 2, Atarius teaches generating a common code associated with each a base station group including more than one base station as said second spreading code (Atarius paragraph 16: “the base stations use the same long code”); (Atarius paragraph 17: “The second group of base stations can use a second long code.”); fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell; paragraph 17: “the mobile station can determine the source (that is, the cell number) of signals from base stations in the second group by calculating how much the second long code has been shifted.”); storing said common code in base stations (not in Atarius but would be obvious as explained below) of said base station group and a mobile station belonging to said base station group (Atarius paragraph 17: “The mobile station can store or obtain a list of long codes”) to permit communication between the mobile station and the base station group (Atarius abstract: “A group of base stations or directional antennas use the same long code and synchronization codes. However, each source shifts the long code by a different amount so that for any two sources there is a unique difference... When the receiver receives the two signals.”); and transmitting a signal which is spread with said second spreading code between one of said more than one base station and a mobile station (Atarius fig. 1: 10, 12, 14, 15), wherein said second spreading code functions as an identifier of said base station group (Atarius paragraph 16: “the base stations use the same long code.”)

(Atarius paragraph 17: “~~The second group of base stations can use a second long code;~~”; fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell; paragraph 17: “~~the mobile station can identify the source (that is, the cell number) of signals from base stations in the second group by calculating how much the spreading code has been shifted;~~” or said network type in said more than one base station and said mobile station (“or”: first condition is taught by the reference as mentioned above).

10. Atarius does not teach storing said common code in base stations. Fukawa 5568654 teaches storing said common code in base stations (Fukawa col. 15 lines 31-39; col. 10 line 59 to col. 11 line 18). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Fukawa into Atarius since Atarius suggests base station common code (something broad) in general and Fukawa suggests the beneficial use of storing common code in base stations such as compare previous location to current location to detect a location change which would initiate a sending of a registration signal (col. 10 line 59 to col. 11 line 18) in the analogous art of telecommunications.

11. As per claim 3, Atarius teaches a base station using said second spreading code as a common code assigned to each a base station group, said base station group including more than one of said base station (Atarius paragraph 16: “~~the base stations use the same long code;~~”); (Atarius paragraph 17: “~~The second group of base stations can use a second long code;~~”; fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell; paragraph 17: “~~the mobile station can identify the source (that is, the cell number) of signals from base stations in the second group by calculating how much the spreading code has been shifted;~~”); and a mobile station communicating with said base station by using a signal which is

spread by said second spreading code assigned to said base station (Atarius paragraph 17: “~~The second group of base stations can use a second long code.”~~; fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell), wherein said second spreading code functions as an identifier of said base station group (Atarius paragraph 16: “~~the base stations use the same long code.”~~) (Atarius paragraph 17: “~~The second group of base stations can use a second long code.”~~; fig. 2a paragraph 11 discusses cell#20; fig. 1 paragraph 11 discusses base station 10 for one cell; paragraph 17: “~~the mobile station can identify the source (that is, the cell number) of signals from base stations in the second group by calculating how much the second long code has been shifted.”~~) or said network type in said base station and said mobile station (“or”: first condition is taught by the reference as mentioned above) and said common code is stored in base stations (not in Atarius but would be obvious as explained below) of said base station group and a mobile station belonging to said base station group (Atarius paragraph 17: “~~The mobile station can store or obtain a list of long codes”~~) to permit communication between the mobile station and the base station group (Atarius abstract: “~~A group of base stations or directional antennas use the same long code and synchronization codes. However, each source shifts the long code by a different amount so that for any two sources there is a unique difference. When the receiver receives the two signals, . . .”~~).

12. Atarius does not teach storing said common code in base stations. Fukawa 5568654 teaches storing said common code in base stations (Fukawa col. 15 lines 31-39; col. 10 line 59 to col. 11 line 18). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the teachings of Fukawa into Atarius since Atarius suggests base station common code (something broad) in general and Fukawa suggests the

beneficial use of storing common code in base stations such as compare previous location to current location to detect a location change which would initiate a sending of a registration signal (col. 10 line 59 to col. 11 line 18) in the analogous art of telecommunications.

Allowable Subject Matter

13. Claims 4, 6, 7, 9 are allowed.
14. The following is a statement of reasons for the indication of allowable subject matter:
The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:
15. As per claim 4: transmitting a signal after spreading said signal doubly with a first spreading code in a first spreading code group and a second spreading code in a second spreading code group, said first spreading code having the same repetition period as an information symbol period in the communication system, said second spreading code having a longer repetition period than the information symbol period, said first spreading code and said second spreading code forming enlarging spreading codes for enlarging a band of a wide-band signal of the communication system, a rate of said enlarging spreading codes being higher than an information rate of the communication system
16. As per claim 6: transmitting a signal after spreading said signal doubly with a first spreading code in first spreading code group and a second spreading code in a second spreading code group, said first spreading code having the same repetition

period as an information symbol period in the communication system, said second spreading code having a longer repetition period than the information symbol period, said first spreading code and said second spreading code forming enlarging spreading codes for enlarging a band of a wide-band signal of the communication system, a rate of said enlarging spreading codes being higher than an information rate of the communication system

17. As per claim 7: transmitting a signal after spreading said signal doubly with a first spreading code in a first spreading code group and a second spreading code in a second spreading code group, said first spreading code having the same repetition period as an information symbol period in the communication system, said second spreading code having a longer repetition period than the information symbol period, said first spreading code and said second spreading code forming enlarging spreading codes for enlarging a band of a wide-band signal of the communication system, a rate of said enlarging spreading codes being higher than an information rate of the communication system

18. As per claim 9: transmitting a signal after spreading said signal doubly with a first spreading code in first spreading code group and a second spreading code in a second spreading code group, said first spreading code having the same repetition period as an information symbol period in the communication system, said second

spreading code having a longer repetition period than the information symbol period, said first spreading code and said second spreading code forming enlarging spreading codes for enlarging a band of a wide-band signal of the communication system, a rate of said enlarging spreading codes being higher than an information rate of the communication system,

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Monday through Friday
20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300
21. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pankaj Kumar/

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Page 10

Primary Examiner
Art Unit 2611

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